

## NEW DATA ON THE CARABID BEETLES (COLEOPTERA: CARABIDAE) OF MT. FRUŠKA GORA (NORTHERN SERBIA)

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### Abstract

Adult carabid beetles were collected from the territory of Mt. Fruška Gora (Northern Serbia) over the period 2002-2008. The investigations were performed at 26 localities. During the study altogether 219 specimens were captured. These beetles were collected mostly by hand, but some individuals were caught by pitfall and light traps as well. In total 64 species classified into 33 genera, 16 tribes, and six subfamilies were found.

*Agonum monachum* (Duftschmid, 1812) is a new species for the fauna of Serbia. Twenty-seven species are recorded for the first time for Mt. Fruška Gora. The presence of the tribe Perigonini, genus *Perigona* Laporte, 1835 and subgenus *Trechicus* LeConte, 1853 is registered in Northern Serbia for the first time in this study. The species *Ophonus* (*Metophonus*) *cordatus* (Duftschmid, 1812), *Acupalpus* (*Acupalpus*) *flavicollis* (Sturm, 1825), *Stenolophus* (*Stenolophus*) *skrimshiranus* Stephens, 1828, *Dromius* (*Dromius*) *quadrimaculatus* (Linnaeus, 1758), *Perigona* (*Trechicus*) *nigriceps* (Dejean, 1831), *Agonum monachum*, and *Pterostichus* (*Phonias*) *ovoideus* (Sturm, 1824) were found in Vojvodina Province for the first time. The findings of the species *Chlaenius* (*Chlaeniellus*) *tristis* (Schaller, 1783), *Ophonus* (*Hesperophonus*) *azureus* (Fabricius, 1775), and *Ophonus* (*Metophonus*) *puncticeps* Stephens, 1828 are the first precise ones for the species for the territory of Vojvodina Province. After the present study the carabid fauna of Mt. Fruška Gora currently comprises 184 species.

KEY WORDS: carabids, ground beetles, fauna, distribution, Vojvodina Province

### Introduction

Recently, ČURČIĆ *et al.* (2007) published a monograph on carabid beetles inhabiting Serbia. Altogether 576 species and 167 subspecies from 107 genera have been listed from the country. It was noted that the northern and southeastern parts of Serbia are insufficiently studied.

Mt. Fruška Gora is located in the southeast region of the Pannonian Basin (North Serbia and partly in Croatia). The mountain, which is 78 km long and 12.5 km wide, stretches in an east-south direction and represents an extreme eastern branch of the Dinarides (ŠIMIĆ, 2008). It was proclaimed a national park in 1960. Previous investigations on the diversity of ground beetles from Mt. Fruška Gora were few and systematic studies are lacking (CSIKI, 1946; PANIN, 1955; TALLÓSI, 1984a, 1984b; TOŠEVSKI, 1990; RADOVIĆ *et al.*, 1995; PAVIĆEVIĆ *et al.*, 1997; DROVENIK & PEKS, 1999; ČURČIĆ, 2000, 2003). ČURČIĆ (2008) and ČURČIĆ & STOJANOVIĆ (2008) gave new data on the group from the investigated area and presented a faunistic list of the taxa from there collected during the period 2002-2003 (67 species and 18 subspecies from 28 genera, which represents 11.63% of all known carabid species from Serbia). Afterwards, GUÉORGUIEV (2008) reported 108 species from Mt. Fruška Gora from material from several European museums. Twenty species were noted as new for the fauna of the country and 56 were cited for Vojvodina Province for the first time (GUÉORGUIEV, 2008). Finally, 157 species were so far found to inhabit Mt. Fruška Gora according to available data from literature (TALLÓSI, 1984a, 1984b; ČURČIĆ *et al.*, 2007; ČURČIĆ, 2008; ČURČIĆ & STOJANOVIĆ, 2008; GUÉORGUIEV, 2008).

Table I. Investigated localities of Mt. Fruška Gora.

No.	UTM code	Locality
1	DR 00	Brankovac
2	DR 00	Crni Čot
3	DR 20	Čortanovci
4	DR 10	Direk
5	DR 00	Dumbovački Rit
6	CQ 99	Glavica
7	DR 10	Glavica - Sremska Kamenica
8	DR 10	Grgeteg Monastery
9	DQ 19	Iriški Venac
10	CQ 99	Kraljevac
11	DR 00	Ledinci
12	CQ 99	Letenka
13	CQ 89	Ležimir
14	CR 60	Motel Lipovača - Vorovo Forest
15	DQ 19	Novo Hopovo Monastery
16	DR 00	Osovje
17	DR 00	Osovje - Crni Čot
18	CQ 99	Osovje - Letenka
19	CR 90	Papratski Do
20	DR 00	Paragovo
21	DR 00	Popovica
22	DR 10	Rakovački Rit
23	CQ 89	Ravne - Ležimir
24	DR 00	Sremska Kamenica
25	DR 10	Stražilovo
26	CQ 79	Vorovo Forest

## Materials and Methods

The material treated herein was collected mostly by hand, but some specimens were caught by both pitfall and light traps. The sampling was done during the period 2002-2008 at 26 localities mostly by the second contributor of the present study (Tab. I). UTM codes of sampling localities are additionally given (Tab. I). After the collecting, the carabid material was prepared, labelled, and determined. The permanent preparations of the collected material (219 carabid specimens) were deposited in the collections of the Institute of Zoology, Faculty of Biology, University of Belgrade, Belgrade, and the Fruška Gora National Park, Sremska Kamenica. Species identification was performed according to TRAUTNER & GEIGENMÜLLER (1987), HÜRKA (1996), TURIN *et al.* (2003), and FREUDE *et al.* (2004). The systematics and nomenclature of LÖBL & SMETANA (2003) were used, but the additional data have also been treated for certain taxa (VIGNA TAGLIANTI, 2011). The distribution of collected species is located on a 10 x 10 km UTM map (Fig. 1).

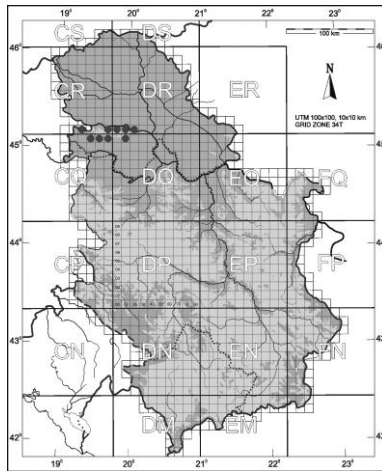


Figure 1. Distribution of the collected carabid beetles from Mt. Fruška Gora (Northern Serbia).

## Results and Discussion

The present paper gives data on 64 species from 33 genera, 16 tribes, and six subfamilies found on Mt. Fruška Gora by D. Stojanović and G. Grbić. The registered taxa are listed below and their distribution is given in Fig. 1. Previous data on the species distribution in Serbia are presented according to ČURČIĆ *et al.* (2007) and GUÉORGUIEV (2008).

All registered species belong to the following subfamilies: Brachininae (with one tribe, two genera, and two species), Carabinae (with two tribes, two genera, and three species), Harpalinae (with nine tribes, 24 genera, and 50 species), Nebriinae (with one tribe, two genera, and two species), Scaritinae (with one tribe, one genus, and one species), and Trechinae (with two tribes, two genera, and six species).

## Family Carabidae

## Subfamily Brachininae

## Tribe Brachinini

1. *Aptinus (Aptinus) bombardata* (Illiger, 1800)

Material examined: Brankovac (DR 00) (1♀, 07-27.07.2005, leg. D. Stojanović); Letenka (CQ 99) (9♂, 4♀, 07-27.07.2005, leg. D. Stojanović; 1♂, 1♀, 01.09.2005, leg. D. Stojanović).

Notes: Species widely distributed in Serbia.

2. *Brachinus (Brachinus) crepitans* (Linnaeus, 1758)

Material examined: Ledinci (DR 00) (1♂, 10.06.2004, leg. D. Stojanović); Rakovački Rit (DR 10) (1♂, 21.04.2008, leg. D. Stojanović).

Notes: Species widely distributed in Serbia.

## Subfamily Carabinae

## Tribe Carabini

3. *Carabus (Hygrocarabus) variolosus* Fabricius, 1787

Material examined: Stražilovo (DR 10) (1♂, 14.04.2006, leg. D. Stojanović).

Notes: Species found mostly in the northern part of Serbia.

4. *Carabus (Morphocarabus) praecegens* Palliardi, 1825

Material examined: Osovlje - Letenka (CQ 99) (2♂, 3♀, 27.07.2005, leg. D. Stojanović).

Notes: Endemic to Mt. Fruška Gora and its surroundings.

## Tribe Cychrini

5. *Cychrus semigranosus* Palliardi, 1825

Material examined: Papratski Do (CR 90) (1♀, 10.07.2007, leg. D. Stojanović).

Notes: Species widely distributed in Serbia.

## Subfamily Harpalinae

## Tribe Chlaeniini

6. *Callistus lunatus* (Fabricius, 1775)

Material examined: Osovlje (DR 00) (1♂, 06.07.2005, leg. D. Stojanović).

Notes: Species widely distributed in Serbia.

7. *Chlaenius (Chlaeniellus) nigricornis* (Fabricius, 1787)

Material examined: Rakovački Rit (DR 10) (1♂, 21.04.2008, leg. D. Stojanović).

Notes: Present in Serbia except its southern part.

8. *Chlaenius (Chlaeniellus) vestitus* (Paykull, 1790)

Material examined: Čortanovci (DR 20) (1♂, 15.04.2005, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

9. *Chlaenius (Chlaeniellus) tristis* (Schaller, 1783)

Material examined: Vorovo Forest (CQ 79) (1♂, 25.06.2008, leg. D. Stojanović). It was collected by hand.

Notes: First exact data from the Vojvodina Province and first record from Mt. Fruška Gora.

10. *Chlaenius (Chlaenites) spoliatus* (Rossi, 1792)

Material examined: Stražilovo (DR 10) (1♂, 1♀, 14.07.2005, leg. D. Stojanović).

Notes: Species distributed in eastern, central, and northern regions of Serbia.

## Tribe Harpalini

11. *Acupalpus (Acupalpus) flavicollis* (Sturm, 1825)

Material examined: Vorovo Forest (CQ 79) (1♂, 27.04.2006, leg. D. Stojanović). It was collected by hand.

Notes: First record from both Mt. Fruška Gora and the Vojvodina Province.

12. *Anisodactylus (Pseudanisodactylus) signatus* (Panzer, 1796)

Material examined: Rakovački Rit (DR 10) (1♂, 21.04.2008, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

13. *Anthracus consputus* (Duftschmid, 1812)

Material examined: Ledinci (DR 00) (1♂, 02.06.2002, leg. D. Stojanović; 2♀, 10.06.2004, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

14. *Diachromus germanus* (Linnaeus, 1758)

Material examined: Dumbovački Rit (DR 00) (1♂, 27.05.2008, leg. D. Stojanović).

Notes: Present in Serbia except its southern part.

15. *Harpalus (Cryptophonus) melancholicus* (Dejean, 1829)

Material examined: Osovlje - Letenka (CQ 99) (1♂, 27.07.2005, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

16. *Harpalus (Harpalus) affinis* (Schrank, 1781)

Material examined: Direk (DR 10) (1♂, 12.06.2008, leg. D. Stojanović); Iriški Venac (DQ 19) (1♀, 01.06.2003, leg. D. Stojanović); Vorovo Forest (CQ 79) (1♂, 17.05.2005, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

17. *Harpalus (Harpalus) distinguendus* (Duftschmid, 1812)

Material examined: Vorovo Forest (CQ 79) (1♂, 27.04.2006, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

18. *Harpalus (Harpalus) froelichii* Sturm, 1818

Material examined: Vorovo Forest (CQ 79) (1♂, 17.05.2005, leg. D. Stojanović).

Notes: Species present in Northern Serbia.

19. *Harpalus (Harpalus) honestus* (Duftschmid, 1812)

Material examined: Iriški Venac (DQ 19) (1♂, 23.05.2008, leg. D. Stojanović).

Notes: Species widely distributed in Serbia.

20. *Harpalus (Harpalus) pumilus* Sturm, 1818

Material examined: Grgeteg Monastery (DR 10) (1♀, 06.05.2008, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

21. *Harpalus (Harpalus) serripes* (Quensel in Schönherr, 1806)

Material examined: Osovlje (DR 00) (1♂, 14.06.2005, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

22. *Harpalus (Pseudophonus) calceatus* (Duftschmid, 1812)

Material examined: Osovlje - Letenka (CQ 99) (1♀, 27.07.2005, leg. D. Stojanović).

Notes: Species widely distributed in Serbia.

23. *Harpalus (Pseudophonus) griseus* (Panzer, 1796)

Material examined: Osovlje - Letenka (CQ 99) (1♂, 27.07.2005, leg. D. Stojanović); Stražilovo (DR 10) (1♂, 14.07.2005, leg. D. Stojanović); Vorovo Forest (CQ 79) (1♀, 18.06.2008, leg. D. Stojanović; 1♂, 1♀, 25.06.2008, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

24. *Harpalus (Pseudophonus) rufipes* (De Geer, 1774)

Material examined: Ledinci (DR 00) (1♂, 02.06.2002, leg. D. Stojanović); Osovlje - Letenka (CQ 99) (11♂, 19♀, 27.07.2004, leg. D. Stojanović; 1♂, 27.07.2005, leg. D. Stojanović); Stražilovo (DR 10) (1♀, 14.07.2005, leg. D. Stojanović).

Notes: Species widely distributed in Serbia.

25. *Ophonus (Hesperophonus) azureus* (Fabricius, 1775)

Material examined: Osovlje - Letenka (CQ 99) (9♂, 5♀, 27.07.2005, leg. D. Stojanović); Vorovo Forest (CQ 79) (1♂, 3♀, 25.06.2008, leg. D. Stojanović). It was collected by hand.

Notes: First exact data from Vojvodina Province and first record from Mt. Fruška Gora.

26. *Ophonus (Metophonus) cordatus* (Duftschmid, 1812)

Material examined: Grgeteg Monastery (DR 10) (1♂, 06.05.2008, leg. D. Stojanović); Osovlje - Letenka (CQ 99) (1♂, 1♀, 27.07.2005, leg. D. Stojanović); Popovica (DR 00) (1♀, 01.06.2008, leg. D. Stojanović); Vorovo Forest (CQ 79) (2♂, 1♀, 25.06.2008, leg. D. Stojanović). It was collected by hand.

Notes: First record from both Mt. Fruška Gora and Vojvodina Province.

27. *Ophonus (Metophonus) puncticeps* Stephens, 1828

Material examined: Osovlje - Letenka (CQ 99) (1♂, 27.07.2005, leg. D. Stojanović). It was collected by hand.

Notes: First exact data from Vojvodina Province and first record from Mt. Fruška Gora.

28. *Parophonus (Parophonus) maculicornis* (Duftschmid, 1812)

Material examined: Vorovo Forest (CQ 79) (1♂, 25.06.2008, leg. D. Stojanović).

Notes: Species widely distributed in Serbia.

29. *Stenolophus (Stenolophus) mixtus* (Herbst, 1784)

Material examined: Vorovo Forest (CQ 79) (1♀, 25.06.2008, leg. D. Stojanović).

Notes: Present in Serbia except its southern part.

30. *Stenolophus (Stenolophus) skrimshiranus* Stephens, 1828

Material examined: Ledinci (DR 00) (1♂, 1♀, 10.06.2004, leg. D. Stojanović); Popovica (DR 00) (1♀, 01.06.2005, leg. D. Stojanović); Stražilovo (DR 10) (1♀, 14.07.2005, leg. D. Stojanović); Vorovo Forest (CQ 79) (2♀, 25.06.2008, leg. D. Stojanović). It was collected by hand.

Notes: First record from both Mt. Fruška Gora and Vojvodina Province.

31. *Stenolophus (Stenolophus) teutonius* (Schrank, 1781)

Material examined: Rakovački Rit (DR 10) (1♂, 21.04.2008, leg. D. Stojanović); Vorovo Forest (CQ 79) (1♂, 1♀, 25.06.2008, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

## Tribe Lebiini

32. *Dromius (Dromius) quadrimaculatus* (Linnaeus, 1758)

Material examined: Iriški Venac (DQ 19) (1♀, 02.12.2007, leg. D. Stojanović); Osovlje - Letenka (CQ 99) (1♀, 27.07.2005, leg. D. Stojanović); Vorovo Forest (CQ 79) (1♀, 21.02.2008, leg. D. Stojanović). It was collected by hand.

Notes: First record from both Mt. Fruška Gora and Vojvodina Province.

33. *Lebia (Lebia) cruxminor* (Linnaeus, 1758)

Material examined: Vorovo Forest (CQ 79) (1♀, 27.04.2006, leg. D. Stojanović).

Notes: Present in Serbia except its western part.

## Tribe Licinini

34. *Badister (Badister) bullatus* (Schrank, 1798)

Material examined: Ledinci (DR 00) (2♂, 10.06.2004, leg. D. Stojanović); Ravne - Ležimir (CQ 89) (1♂, 1♀, 31.03.2005, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

35. *Badister (Badister) unipustulatus* Bonelli, 1813

Material examined: Ledinci (DR 00) (1♀, 10.06.2004, leg. D. Stojanović); Popovica (DR 00) (1♀, 01.06.2005, leg. D. Stojanović).

Notes: Species distributed in central, eastern, and northern regions of Serbia.

## Tribe Perigonini

36. *Perigona (Trechicus) nigriceps* (Dejean, 1831)

Material examined: Ledinci (DR 00) (1♂, 10.06.2004, leg. D. Stojanović). It was collected by hand.

Notes: First record from both Mt. Fruška Gora and Vojvodina Province. Additionally, first report of the tribe Perigonini, genus *Perigona* Laporte, 1835, and subgenus *Trechicus* LeConte, 1853 from Vojvodina Province.

## Tribe Platynini

37. *Agonum (Agonum) monachum* (Duftschmid, 1812)

Material examined: Ledinci (DR 00) (1♂, 1♀, 10.06.2004, leg. D. Stojanović). It was collected by hand.

Notes: New species for Serbia.

38. *Anchomenus (Anchomenus) dorsalis* (Pontoppidan, 1763)

Material examined: Crni Čot (DR 00) (1♂, 16.05.2005, leg. D. Stojanović); Vorovo Forest (CQ 79) (1♀, 27.04.2006, leg. D. Stojanović).

Notes: Species widely distributed in Serbia.



39. *Paranchus albipes* (Fabricius, 1796)

Material examined: Sremska Kamenica (DR 00) (1♀, 07.09.2006, leg. D. Stojanović); Vorovo Forest (CQ 79) (1♂, 07.06.2008, leg. D. Stojanović).

Notes: Present in Serbia except its southern part.

## Tribe Pterostichini

40. *Abax (Abacopercus) carinatus* (Duftschmid, 1812)

Material examined: Novo Hopovo Monastery (DQ 19) (1♂, 1♀, 28.03.2005, leg. D. Stojanović); Ledinci (DR 00) (1♀, 21.07.2002, leg. D. Stojanović); Letenka (CQ 99) (1♂, 1♀, 07-27.07.2005, leg. D. Stojanović); Papratski Do (CR 90) (2♀, 10.07.2007, leg. D. Stojanović); Paragovo (DR 00) (1♂, 14.04.2006, leg. D. Stojanović); Vorovo Forest (CQ 79) (1♂, 07.06.2008, leg. D. Stojanović).

Notes: Species widely distributed in Serbia.

41. *Abax (Abax) parallelepipedus* (Piller & Mitterpacher, 1783)

Material examined: Kraljevac (CQ 99) (1♂, 1♀, 07-27.07.2005, leg. D. Stojanović); Letenka (CQ 99) (2♀, 07-27.07.2005, leg. D. Stojanović).

Notes: Species distributed in central, northern, and eastern regions of Serbia.

42. *Abax (Abax) parallelus* (Duftschmid, 1812)

Material examined: Iriški Venac (DQ 19) (1♂, 01.06.2003, leg. D. Stojanović); Kraljevac (CQ 99) (1♀, 07-27.07.2005, leg. D. Stojanović); Letenka (CQ 99) (2♂, 1♀, 07-27.07.2005, leg. D. Stojanović); Papratski Do (CR 90) (1♀, 10.07.2007, leg. D. Stojanović); Vorovo Forest (CQ 79) (1♂, 07.06.2008, leg. D. Stojanović).

Notes: Present in Serbia except its southern part.

43. *Molops (Molops) piceus* (Panzer, 1793)

Material examined: Crni Čot (DR 00) (1♂, 16.05.2005, leg. D. Stojanović); Ravne - Ležimir (CQ 89) (1♂, 07.04.2005, leg. D. Stojanović); Stražilovo (DR 10) (1♂, 14.04.2006, leg. D. Stojanović).

Notes: Species widely distributed in Serbia.

44. *Pterostichus (Feronidius) melas* (Creutzer, 1799)

Material examined: Glavica (CQ 99) (1♀, 26.10.2006, leg. G. Grbić); Vorovo Forest (CQ 79) (1♀, 18.05.2005, leg. D. Stojanović).

Notes: Species widely distributed in Serbia.

45. *Pterostichus (Morphnosoma) melanarius* (Illiger, 1798)

Material examined: Ležimir (CQ 89) (1♀, 26.06.2008, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

46. *Pterostichus (Phonias) ovoideus* (Sturm, 1824)

Material examined: Vorovo Forest (CQ 79) (1♂, 1♀, 07.06.2008, leg. D. Stojanović). It was collected by hand.

Notes: First record from both Mt. Fruška Gora and Vojvodina Province.

47. *Pterostichus (Platysma) niger* (Schaller, 1783)

Material examined: Stražilovo (DR 10) (1♂, 14.07.2005, leg. D. Stojanović).

Notes: Present in Serbia except its southern part.

## Tribe Sphodrini

48. *Calathus (Neocalathus) melanocephalus* (Linnaeus, 1758)

Material examined: Osovlje (DR 00) (1♀, 14.06.2005, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

49. *Laemostenus (Pristonychus) punctatus* (Dejean, 1828)

Material examined: Brankovac (DR 00) (1♀, 31.05.2005, leg. D. Stojanović); Letenka (CQ 99) (1♀, 01.09.2005, leg. D. Stojanović); Papratski Do (CR 90) (1♀, 10.07.2007, leg. D. Stojanović); Ravne - Ležimir (DR 00) (1♂, 2♀, 07.04.2005, leg. D. Stojanović; 1♀, 15.04.2005, leg. D. Stojanović).

Notes: Present in Serbia except its southern part.

50. *Synuchus (Synuchus) vivalis* (Illiger, 1798)

Material examined: Vorovo Forest (CQ 79) (1♀, 25.06.2008, leg. D. Stojanović).

Notes: Species distributed in central and northern parts of Serbia.

## Tribe Zabryni

51. *Amara (Amara) eurynota* (Panzer, 1796)

Material examined: Vorovo Forest (CQ 79) (1♂, 07.06.2008, leg. D. Stojanović).

Notes: Species distributed in eastern and northern parts of Serbia.

52. *Amara (Amara) montivaga* Sturm, 1825

Material examined: Popovica (DR 00) (1♂, 19.05.2008, leg. D. Stojanović).

Notes: Present in Serbia except its central part.

53. *Amara (Amara) saphyrea* Dejean, 1828

Material examined: Motel Lipovača - Vorovo Forest (CR 60) (1♀, 09.05.2008, leg. D. Stojanović).

Notes: Present in Serbia except its southern part.

54. *Amara (Amara) similata* (Gyllenhal, 1810)

Material examined: Osovlje - Crni Čot (DR 00) (1♂, 04.05.2005, leg. D. Stojanović); Ravne - Ležimir (DR 00) (1♀, 15.04.2005, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

55. *Amara (Bradytus) apricaria* (Paykull, 1790)

Material examined: Sremska Kamenica (DR 00) (1♀, 05.09.2006, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

## Subfamily Nebriinae

## Tribe Nebriini

56. *Leistus (Pogonophorus) rufomarginatus* (Duftschmid, 1812)

Material examined: Brankovac (DR 00) (1♂, 07-27.07.2005, leg. D. Stojanović).

Notes: Present in Serbia except its western part.

57. *Nebria (Nebria) brevicollis* (Fabricius, 1792)

Material examined: Vorovo Forest (CQ 79) (1♂, 17.05.2005, leg. D. Stojanović).

Notes: Species widely distributed in Serbia.

## Subfamily Scaritinae

## Tribe Clivinini

58. *Clivina (Clivina) fossor* (Linnaeus, 1758)

Material examined: Ledinci (DR 00) (4♀, 10.06.2004, leg. D. Stojanović).

Notes: Present in Serbia except its southern part.

## Subfamily Trechinae

## Tribe Bembidiini

59. *Bembidion (Eupetedomus) dentellum* (Thunberg, 1787)

Material examined: Stražilovo (DR 10) (1♀, 14.07.2005, leg. D. Stojanović).

Notes: Present in Serbia except its southern part.

60. *Bembidion (Notaphus) varium* (Olivier, 1795)

Material examined: Osovlje (DR 00) (1♀, 06.07.2005, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

61. *Bembidion (Peryphanes) deletum* Audinet-Serville, 1821

Material examined: Ledinci (DR 00) (1♀, 02.06.2002, leg. D. Stojanović); Vorovo Forest (CQ 79) (1♂, 1♀, 27.04.2006, leg. D. Stojanović; 3♂, 1♀, 07.06.2008, leg. D. Stojanović; 2♂, 4♀, 25.06.2008, leg. D. Stojanović).

Notes: Species widely distributed in Serbia.

62. *Bembidion (Peryphus) tetracolum* Say, 1823

Material examined: Glavica - Sremska Kamenica (DR 10) (1♂, 03.07.2008, leg. D. Stojanović); Ledinci (DR 00) (1♂, 02.06.2002, leg. D. Stojanović); Osovlje (DR 00) (1♀, 14.06.2005, leg. D. Stojanović).

Notes: Species widely distributed in Serbia.

## Tribe Trechini

63. *Trechus (Trechus) quadristriatus* (Schrank, 1781)

Material examined: Ledinci (DR 00) (1♂, 02.06.2002, leg. D. Stojanović); Osovlje (DR 00) (8♂, 1♀, 14.06.2005, leg. D. Stojanović). It was collected by hand.

Notes: First record from Mt. Fruška Gora.

64. *Trechus (Trechus) subnotatus* Dejean, 1831

Material examined: Stražilovo (DR 10) (1♂, 14.04.2006, leg. D. Stojanović).

Notes: Present in Serbia except its eastern part.

The richest subfamilies in terms of number of species are Harpalinae (50 species) and Trechinae (six species). Within tribes the highest number of species is present in Harpalini (21 species) and Pterostichini (eight species). *Harpalus* (with 10 species) and *Amara* (with five species) represent genera with the highest number of species.

The species *Agonum monachum* is a new one for the fauna of Serbia. Additionally, 27 species are found for the first time for Mt. Fruška Gora. The carabidofauna of the mountain is now better studied as 184 species have been listed. The presence of the tribe Perigonini, genus *Perigona*, and subgenus *Trechicus* we registered in Northern Serbia for the first time. Seven species [*Ophonus (Metophonus) cordatus*, *Acupalpus (Acupalpus) flavicollis*, *Stenolophus (Stenolophus) skrimshirani*, *Dromius (Dromius) quadrimaculatus*, *Perigona (Trechicus) nigriceps*, *Agonum monachum*, and *Pterostichus (Phonias) ovoideus*] are recorded for the first time for the fauna of Northern Serbia (Vojvodina Province). The findings of three species [*Chlaenius (Chlaeniellus) tristis*, *Ophonus (Hesperophonus) azureus*, and *Ophonus (Metophonus) puncticeps*] are actually the first precise ones for the species for the territory of Vojvodina Province.

Among carabids *Carabus (Morphocarabus) praecellens*, a species endemic to Mt. Fruška Gora and its surroundings, was found.

## Conclusions

This paper reports 64 species, 33 genera, 16 tribes, and six subfamilies of carabids from Mt. Fruška Gora. After the present study the carabid fauna of Mt. Fruška Gora comprises a total of 184 species. This is almost one third (31.94%) of the total number of known species in Serbia (ĆURČIĆ *et al.*, 2007).

The findings of numerous carabid species at forest localities of Mt. Fruška Gora support the opinion that this mountain has played the role of a forest refuge in the Pannonian Plain, where certain Dinaric carabid taxa might be conserved.

The final list of carabids of Mt. Fruška Gora is not complete and we may expect findings of new taxa for the investigated area in future. Therefore, much more remains to be done before we can say that the carabids of Mt. Fruška Gora and Northern Serbia are sufficiently known.

## Acknowledgments

We are thankful to Mrs. Gordana GRBIĆ (Novi Sad, Serbia), who collected some carabid specimens included in the study. Additionally, Nina ĆURČIĆ, MSc (Belgrade, Serbia) helped us with producing the UTM map included. The financial support of the Serbian Ministry of Education and Science is appreciated (Grants Nos. 173038 and III-43002).

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## НОВИ ПОДАЦИ О ТРЧУЉЦИМА (COLEOPTERA: CARABIDAE) ПЛАНИНЕ ФРУШКЕ ГОРЕ (СЕВЕРНА СРБИЈА)

СРЕЋКО ЂУРЧИЋ И ДЕЈАН СТОЈАНОВИЋ

### Извод

У овом раду су изложени подаци о одраслим примерцима трчуљака сакупљеним са 26 локалитета на територији Фрушке горе (северна Србија) од 2002. до 2008. године. Током ове студије прикупљено је 219 јединки трчуљака. Ови тврдокрилци су углавном сакупљани ручно, али је одређен број примерака прикупљен уз помоћ Барберових и светлосних клопки. Нађене су 64 врсте сврстане у 33 рода, 16 трибуса и шест подфамилија.

*Agonum monachum* је врста нова за фауну Србије. Укупно 27 врста трчуљака је по први пут забележено за територију Фрушке горе. Присуство трибуса Perigonini, рода *Perigona* и подрода *Trechicus* у северној Србији је по први пут забележено у овој студији. Седам врста је по први пут констатовано у Војводини [*Ophonus* (*Metophonus*) *cordatus*, *Acupalpus* (*Acupalpus*) *flavicollis*, *Stenolophus* (*Stenolophus*) *skrimshiranus*, *Dromius* (*Dromius*) *quadrimaculatus*, *Perigona* (*Trechicus*) *nigriceps*, *Agonum monachum* и *Pterostichus* (*Phonias*) *ovoideus*]. Дати су први прецизни подаци о налазима три врсте за подручје Војводине [*Chlaenius* (*Chlaeniellus*) *tristis*, *Ophonus* (*Hesperophonus*) *azureus* и *Ophonus* (*Metophonus*) *puncticeps*].

Након ове студије фауна трчуљака Фрушке горе тренутно броји укупно 184 врсте.

Received May 19th, 2011  
Accepted December 14th, 2011